

ABSTRACT

The present invention provides a method and apparatus which provides a signal with an output frequency higher than an input frequency. A phase generator generates multiple phase signals from the input signal with each phase signal having the same frequency as the input signal but being out of phase with the input signal by multiples of a set time interval. These phase signals are transmitted to a multiplexer. The multiplexer output is determined by a select word generated by an accumulator from a stored value. The accumulator is clocked by the multiplexer output and the accumulator adds a control word with a set value to the stored value in the accumulator. This addition is accomplished at every cycle of the multiplexer output. By judiciously choosing control word and the time interval between phases, frequencies higher than the input frequency can be generated at the multiplexer output.